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A REVISED ESTIMATE OF THE COST OF COMPLETING THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS

COMMUNICATION

FROM

THE SECRETARY OF TRANSPORTATION

TRANSMITTING

A REVISED ESTIMATE OF THE COST OF COMPLETING THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS, PURSUANT TO THE PROVISIONS OF SECTION 104(b)5, TITLE 23, UNITED STATES CODE

MARCH 1983

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LETTER OF TRANSMITTAL

THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

MAR 14 1983

The Honorable Thomas P. O'Neill
Speaker of the House of Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

In accordance with the requirements of Section 104(b)(5), Title 23, United States Code, I am transmitting a revised estimate of the cost to complete the National System of Interstate and Defense Highways prepared for the purpose of determining apportionment factors for Interstate System funds authorized for the fiscal years ending September 30, 1985, and September 30, 1986.

The factors contained in this estimate are derived from the review and analysis of estimates of costs set forth in 50 bound volumes of individual State reports. Because of their bulk, the State reports are being sent directly to the House Committee on Public Works and Transportation.

This estimate includes the costs for the construction necessary to provide a minimum level of acceptable service on the Interstate System as defined in the Federal-Aid Highway Act of 1981, which amended subsection (b) of Section 108 of the Federal-Aid Highway Act of 1956, and the provisions of the Surface Transportation Assistance Act of 1982. This estimate has been prepared in a joint effort of the Federal Highway Administration and the State highway agencies using uniform procedures. The factors herein reflect proportionate needs based on completion of the Interstate System in accordance with Section 108(b) of the Federal-Aid Highway Act of 1956, as amended.

Sincerely,

Elizabeth Dole

Enclosure

THE 1983 INTERSTATE SYSTEM COST ESTIMATE - A REPORT OF FACTORS FOR USE IN APPORTIONING FUNDS FOR THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS

EXECUTIVE SUMMARY

The remaining cost to complete the Interstate System is estimated, as of January 1, 1982, to be $36.3 billion, of which $32.8 billion is the Federal share. The estimated total cost of the entire System when completed is $123.3 billion, with a Federal share of $109.9 billion. This is an overall cost decrease of $10.6 billion from the 1981 Interstate Cost Estimate of $133.9 billion, with a Federal share of $119.7 billion.

The apportionment factors for distributing the 1985 and 1986 fiscal year apportionments are shown on Table 5 of this report.

The Federal-Aid Highway Act of 1981 in Section 4(b) redefined eligibility for Interstate construction funds. The 1983 Interstate Cost Estimate has been prepared by the Federal Highway Administration and the individual State highway agencies in accordance with Section 4(c) of the Federal-Aid Highway Act of 1981 and includes only the estimated costs of those design concepts, locations, geometrics and other construction features included in the 1981 Interstate Cost Estimate except where the Secretary has determined a Federal law requires a change to those designs, locations, geometrics or other construction features. In accordance with Section 4(b) the work represented in the 1983 estimate basically includes completion of gaps, major upgrading of incorporated segments which were not built with Interstate funds, essential stage construction, and added mixed traffic lanes and high occupany vehicle lanes included in the 1981 estimate. Costs for essential environmental requirements are included as part of gap or major upgrading projects as appropriate.

The 1981 act approved the 1981 estimate as revised to reflect redefinition of completion and withdrawal of certain routes. This resulted in an estimated decrease in System cost of $14.9 billion (including $1.1 billion in System withdrawals) from the 1981 estimate as submitted to Congress. This decrease has been offset by an estimated $4.3 billion increase in System cost during the 2 years between the 1981 estimate and the 1983 estimate. The increase is due in part to obligation of Interstate construction funds ($1.4 billion) on 4R type work (no longer eligible) during that 2-year period before enactment of the redefinition in the 1981 act, and partially to increases in the cost of work ($2.9 billion) remaining eligible.

The added authorizations and other provisions of the Surface Transportation Assistance Act of 1982 have been considered in the preparation of this estimate.

PURPOSE AND SCOPE OF REPORT

Section 104(b)(5), Title 23, United States Code ("Highways"), requires the Secretary of Transportation to make a revised estimate of the cost of completing the designated Interstate Highway System and transmit that report to the Senate and the House of Representatives.

The purpose of the estimate, as summarized in Table 5, is to derive the ratio of the Federal share of the estimated cost of completing the Interstate System in each State to the sum of such costs for all of the States to serve as a basis of apportioning funds authorized for the fiscal years 1985 and 1986. This method of apportionment is specified in Section 104(b)(5) of Title 23, United States Code.

The estimate for apportionment purposes, presented herein, is the eleventh of a series of estimates to be submitted to the Congress in accordance with the law. Following is a tabulation of previous cost estimates along with congressional document reference numbers and fiscal year of funding in which each was used to apportion funds:

Date Submitted	Document Number	Congress	Session	Fiscal Year Apportionment
January 1958	House Doc. 300	85th	2nd	1960,1961,1962
January 1961	House Doc. 49	87th	1st	1963,1964,1965,1966
January 1965	House Doc. 42	89th	1st	1967,1968,1969
January 1968	House Doc. 199	90th	2nd	1970,1971
April 1970	House Doc. 91-317	91st	2nd	1972,1973
January 1972	Comm. Print 92-29	92nd	2nd	1974,1975,1976
July 1975	Comm. Print 94-14	94th	1st	1977
Revision -	Comm. Print 94-38	94th	2nd	1978
May 1977	Comm. Print 95-11	95th	1st	
Revision -	Comm. Print 95-16	95th	1st	1979
Revision -	Comm. Print 95-49	95th	2nd	1980
August 1979	Comm. Print 96-14	96th	1st	
Revision -	Comm. Print 96-15	96th	1st	1981,1982
January 1981	Comm. Print 97-1	97th	1st	
Revision -	Comm. Print 97-28	97th	1st	1983
Revision -	Comm. Print 97-53	97th	2nd	1984

The cost of completing the Interstate System presented in this report represents work eligible for Interstate construction funds as defined in Section 4(b) of the Federal-Aid Highway Act of 1981 which amended Section 108(b) of the 1956 Federal-Aid Highway Act and the costs of work eligible in accordance with the provisions of the Surface Transportation Assistance Act of 1982. The eligibility criteria are detailed in the 1983 Interstate Cost Estimate Instruction Manual and include essential work for gap construction and major upgrading of incorporated

segments, which have had no major Interstate funding, including essential environmental requirements; essential stage construction; and approved additional mixed traffic lane and high occupancy vehicle lane projects which were included in the 1981 estimate. In addition to the estimate of the cost of completing the Interstate System, there is included in this report an estimate of the total cost of the System covering obligations against the Highway Trust Fund together with State matching funds. The latter total cost estimate is summarized in Tables 6 and 7 showing a comparison of the present estimated costs with the estimate presented to the Congress in 1981 and the 1981 estimate as redefined by the provisions of Section 4(b) of the 1981 highway act.

THE DESIGNATED SYSTEM COVERED BY THIS ESTIMATE

The National System of Interstate and Defense Highways, known as the Interstate System, was designated under authority in the Federal-Aid Highway Act of 1944. The System under the original authorization was not to exceed 40,000 miles in total length and was located to connect by routes as direct as practicable the principal metropolitan areas, cities, and industrial centers, to serve the national defense, and connect at suitable border points with the routes of continental importance in the Dominion of Canada and the Republic of Mexico.

The Interstate System was selected by joint action of the State highway department and the Bureau of Public Roads, and routes comprising an estimated 37,700 miles were designated on August 2, 1947. Additional routes, limited to those around and through the urban areas and totaling an estimated 2,300 miles, were designated in September 1955. At the time of the initial System designations, detailed location studies with the necessary engineering and economic analyses were lacking. The locations, therefore, were diagrammatic only, and the designated mileages were those of the measured length of the existing principal highways lying generally on the chosen locations. Further studies led to definite locations based upon more precise engineering and economic information. The length of the System, so established, was determined to be 38,548 miles for routes included in the first estimate, submitted to the Congress in January 1958.

Section 108(1) of the 1956 act (later largely codified as part of Title 23, United States Code) increased the statutory maximum length of the Interstate System from 40,000 to 41,000 miles, but the legislation specifically excluded the cost of the routes which would be designated as a result of the additional 1,000 miles from the estimate to be used for apportionment purposes. The Federal-Aid Highway Act of 1960 included an amendment to Title 23, United States Code, which removed this restriction from the law.

On October 18, 1957, 2,102 miles of Interstate routes were added to the System. The addition of these routes was possible because of the 1,000-mile extension authorized by the 1956 act, and the availability of 1,102 miles of the original 40,000-mile authorization through savings in mileage resulting from the definite location and the more accurate measurement of the System as described in earlier paragraphs. A reserve of 350 miles was held to cover possible increases in lengths of designated routes.

Section 17 of the Hawaii Omnibus Act included an amendment to Title 23, United States Code, which (1) removed the limitation that the Interstate System be designated entirely within the continental United States, (2) provided for the apportionment from the Highway Trust Fund to Hawaii of $12,375,000 of Interstate funds for the fiscal year ending June 30, 1962, and (3) provided for the apportionment

to Hawaii of Interstate funds for subsequent fiscal years pursuant to the provisions of Section 104(b)(5) of Title 23, United States Code. Under the provisions of this amendment, the Federal Highway Administrator approved in August 1960 the addition of three routes to the National System of Interstate and Defense Highways on the island of Oahu in the State of Hawaii. These additions to the System were included in the 1961 and subsequent estimates.

Not all of the routes expected to be added to the System under the 1,102 miles available from the original 40,000 miles were designated at the time of the 1961 and 1965 estimates. The costs of the segments not on finally approved location, totalling about 220 miles, were entered in the 1961 estimate at a cost of $1 million per mile. The mileage reserved for final System measurement, approximately 308 miles, was also entered in the 1961 estimate at $1 million per mile.

During the period between the 1961 estimate and the January 1, 1964, cutoff date for the 1965 estimate, all but 93 miles of the route segments represented in the 220-mile group cited above had been given final location approval and were included in the 1965 estimate at the then current estimate of cost for their construction.

The costs of the segments not on finally approved locations, totalling about 93 miles, were entered in the 1965 estimate at a cost of $5 million per mile. The mileage reserved for final measurement, approximately 21 miles, was also entered in the 1965 estimate at $5 million per mile.

During the period between the 1965 estimate and the January 1, 1967, cutoff date for the 1968 estimate, most of the route segments represented in the 93-mile group cited above were given final location approval and included in the 1968 estimate. Thirty-one miles, reserved for final measurement in the 1968 estimate, were estimated at $10 million per mile.

The Federal-Aid Highway Act of 1968 authorized an additional 1,500 miles on the Interstate System. On December 13, 1968, routes totalling 1,473 miles from the additional authorizations were designated.

During the period between the 1968 estimate and the November 1, 1969, cutoff date for the 1970 estimate, all but 5 miles were given final location approval and included in the 1970 estimate. The 5 miles reserved for final measurement in the 1970 estimate were included in the estimate at $10 million per mile.

Subsequent adjustments to the System including new routes have been made. The Surface Transportation Assistance Act of 1978 specifies in Section 140 that Interstate routes be designated in Los Angeles, California, and in Erie and Onondaga Counties, New York. Section 209 of the Supplemental Appropriations Act for 1978 provided for the designation of a spur in Tacoma, Washington, while Section 311 of the Appropriations Act for 1980 provided for the extension of I-164 in Evansville, Indiana. Finally, the Appropriations Act for 1981, in Section 310 provided for extension of I-170 in St. Louis and designation of I-210 in Alabama, a connector in the vicinity of Mobile-Prichard. All these routes have been designated and the estimated costs for constructing the routes are included in the same manner as other free routes. The System length is now 42,454 miles as of December 31, 1981. A reserve figure of 46 miles, as shown in this report, results from more precise measurement of routes during preparation of plans and final locations and from withdrawals from the System under 23 U.S.C. 103(e)(4). Future

Interstate withdrawals plus final System measurements are expected to keep the total mileage within the authorized limit.

Table 1 shows the System mileage as it was reported in the 1981 estimate, and as it exists for the 1983 estimate.

TABLE 1 - 1981 and 1983 Estimates

1981 Estimate:

System reported in the 1979 estimate, and System additions and adjustments reported by States in this estimate.....	42,498
Reserved for final measurement.....	2
Total.....	42,500

1983 Estimate:

System reported in the 1981 estimate, and System additions and adjustments reported by States in this estimate.....	42,454
Reserved for final measurement.....	46
Total.....	42,500

Public Law 90-238, approved January 2, 1968, amended Section 103, Title 23, United States Code, to authorize an additional 200 miles for the Interstate System to be used for adjustments in the System without an increase to the cost. This provision was amended by both the 1973 and 1976 Federal-Aid Highway Acts, which increased this mileage increment from 200 to 500 miles and also revised the method for determining amounts available for such adjustments. The Surface Transportation Assistance Act of 1978 further amended this provision to provide full funding of the routes designated under this provision and to prohibit additional route designations. Adjustments under Section 103(e)(2) of Title 23, United States Code, have been made in 10 States. The 443 miles designated under this paragraph are not entered in Table 1 or Table 2.

The 1973 Federal-Aid Highway Act further amended Section 103, Title 23, United States Code, adding subsection e(4) to permit the withdrawal of routes or segments in urbanized areas and the substitution of nonhighway public mass transit projects. Only those routes or segments which are not essential to a unified and connected system are eligible for withdrawal. The provision was revised by the 1976 Federal-Aid Highway Act to also permit the withdrawal of segments connecting urbanized areas within a State and the substitution of highway projects in addition to nonhighway transit projects. Thirty-eight separate actions involving the withdrawal of 226 miles have been approved under this provision. The costs for the withdrawn segments are not included in this estimate.

The 1970 Federal-Aid Highway Act amended Section 129 of Title 23, United States Code, by adding new subsection (e), for the purpose of permitting "Federal participation in the (cost of) reconstruction, and improvement of any toll road providing for only two lanes of traffic, which is designated as part of the

Interstate System on date of enactment of this subsection . . . to bring such two-lane toll road to the geometric and construction standards of the Interstate System . . . to facilitate the removal of tolls therefrom." The 1973 Federal-Aid Highway Act amended this new provision to apply to any two-lane toll roads designated as part of the Interstate System on or before June 30, 1973. The amended subsection applies to a portion of I-77, the West Virginia Turnpike, and a portion of I-75, Alligator Alley, in Florida. The costs shown in this estimate for these routes are estimated and reported in the same manner as other free routes.

The Federal-Aid Highway Act of 1968 added Section 139 to Title 23, United States Code, to permit Interstate designation of highway segments on the Federal-aid primary system at the request of the State or States involved if they meet all of the standards for highways on the Interstate System and if they are logical additions or connections. Mileage designated under this section is not chargeable as part of the limitation established in Section 103 of Title 23 and creates no Federal funding responsibility. Hence, no costs for work on segments designated under this section are included in this estimate.

Plate A shows the location of the designated routes which form the basis for this estimate. Table 2 shows the mileage of the Interstate System and other Federal-aid highway systems in each of the States. Mileage designated under 23 U.S.C. 103(e)(2) and 139 are not included in Table 2.

UNIFORM APPLICATION OF STANDARDS

Section 109(b), Title 23, United States Code, provides that the geometric and construction standards to be adopted for the Interstate System shall be those adopted by the Secretary in cooperation with the State highway departments. The section was amended in 1963 to provide that such standards shall be adequate to accommodate the types and volumes of traffic anticipated for a project for the 20-year period commencing from actual construction of such projects. Section 109(b) was further amended in 1966 to state that the standards for the Interstate System shall in all cases provide for at least four lanes of traffic. However, this provision was modified by subsequent legislation to permit the construction of special purpose roadways and special projects to less than four lanes.

Section 109(b) provides also that the Secretary shall apply the standards uniformly throughout the States. Appropriate committees composed of State and Federal engineers, working under the sponsorship of the American Association of State Highway and Transportation Officials (AASHTO), developed the geometric design standards for the Interstate System. These standards were adopted by AASHTO on July 12, 1956, and approved July 17, 1956, by the Commissioner of Public Roads, acting for the Secretary. Revisions to the standards have been adopted by AASHTO and approved for the Secretary as the need for these changes occurred.

Section 104(b)(5), Title 23, United States Code, provides that the Secretary shall make the revised estimate of cost of completing the Interstate System on the basis of the standards referred to above and in accordance with rules and regulations adopted by him and applied uniformly to all of the States. The instruction manual developed for this estimate cited these standards. This manual, together with the standards, guides, specifications, and laws to which it makes reference, and the clarification of the manual provisions served as the "rules and regulations" for preparation of the estimate.

PLATE A

THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS

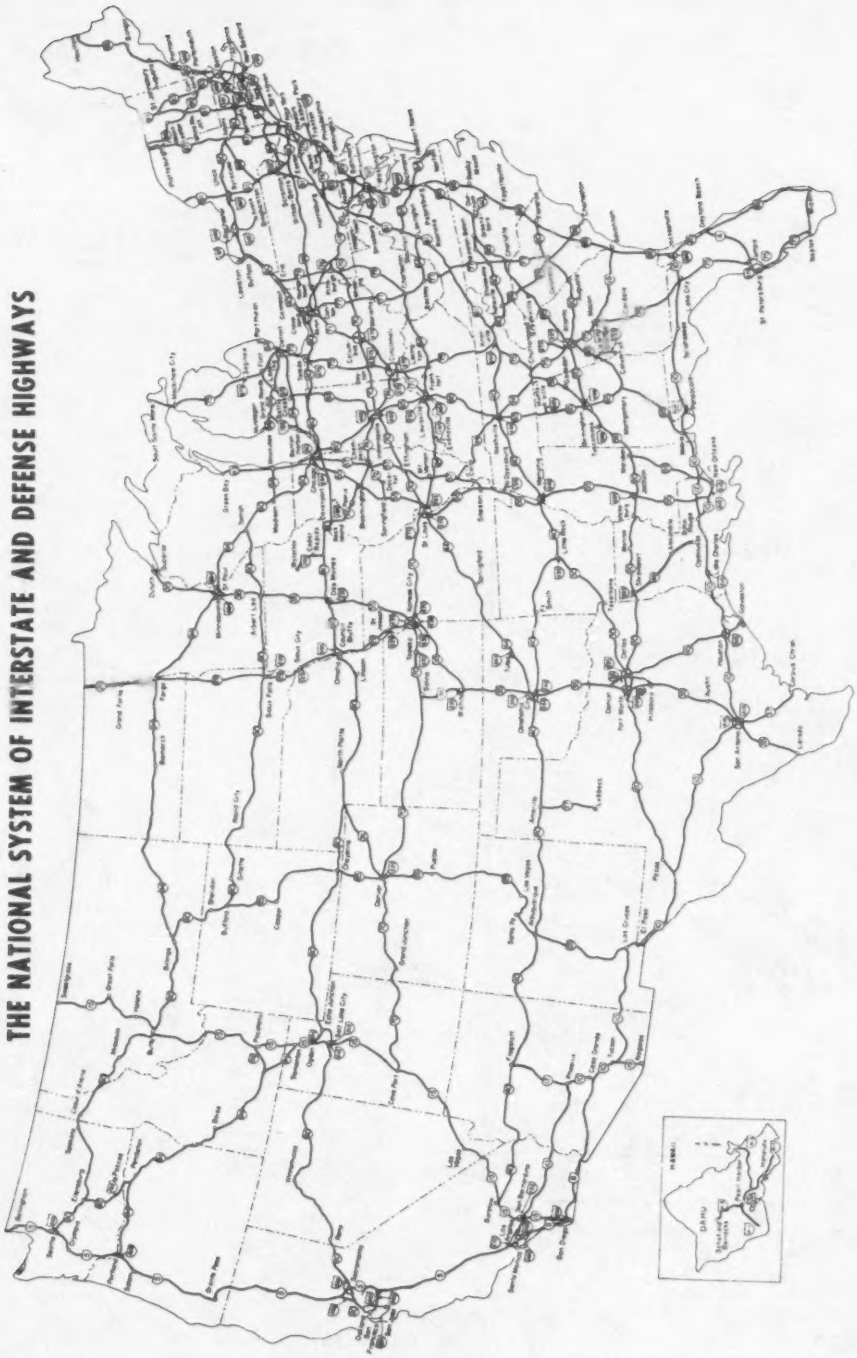

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TABLE 2
MILEAGE OF FEDERAL-AID HIGHWAY SYSTEMS
JANUARY 1, 1982

STATE	INTERSTATE 1/	OTHER FEDERAL-AID PRIMARY	FEDERAL-AID SECONDARY	FEDERAL-AID URBAN	TOTAL
ALABAMA	900	6,931	11,233	2,403	21,473
ALASKA	---	1,817	2,043	104	3,964
ARIZONA	1,167	4,030	3,315	2,044	10,556
ARKANSAS	526	5,347	6,842	1,000	13,715
CALIFORNIA	2,304	11,080	11,050	16,327	40,761
COLORADO	951	4,315	3,450	2,151	10,867
CONNECTICUT	325	1,369	928	2,819	5,441
DELAWARE	41	424	630	272	1,367
DIST. OF COLUMBIA	15	154	---	241	410
FLORIDA	1,413	7,778	4,573	4,998	18,762
GEORGIA	1,156	10,424	14,188	2,984	28,752
HAWAII	51	522	458	185	1,216
IDAHO	612	2,614	4,250	572	8,048
ILLINOIS	1,715	11,214	12,912	6,310	32,151
INDIANA	1,136	5,122	9,088	4,846	20,192
IOWA	782	8,891	13,303	2,309	25,285
KANSAS	821	8,228	22,586	1,404	33,039
KENTUCKY	741	3,891	7,298	1,791	13,721
LOUISIANA	718	3,193	7,630	1,227	12,768
MAINE	315	2,000	2,742	653	5,710
MARYLAND	358	2,123	2,035	1,912	6,428
MASSACHUSETTS	450	2,229	2,113	5,648	10,440
MICHIGAN	1,178	7,361	17,296	5,478	31,313
MINNESOTA	913	9,318	16,255	2,035	28,521
MISSISSIPPI	683	6,042	11,761	1,492	19,978
MISSOURI	1,154	6,908	18,206	2,263	28,531
MONTANA	1,189	5,552	4,405	325	11,771
NEBRASKA	481	7,303	11,414	971	20,169
NEVADA	543	1,847	2,404	351	5,145
NEW HAMPSHIRE	218	1,161	1,267	584	3,230
NEW JERSEY	372	1,561	1,979	5,285	9,197
NEW MEXICO	999	4,170	3,348	618	9,135
NEW YORK	1,332	8,403	6,415	8,842	24,992
NORTH CAROLINA	848	4,692	10,746	1,806	18,092
NORTH DAKOTA	571	5,594	10,381	367	16,913
OHIO	1,530	6,744	11,588	7,325	27,187
OKLAHOMA	809	5,501	8,853	2,138	17,301
OREGON	721	5,018	7,844	1,855	15,438
PENNSYLVANIA	1,564	9,908	8,220	6,678	26,370
RHODE ISLAND	99	397	166	831	1,493
SOUTH CAROLINA	772	5,830	8,968	905	16,475
SOUTH DAKOTA	679	5,860	11,123	356	18,108
TENNESSEE	1,037	6,366	9,927	2,690	20,020
TEXAS	3,163	16,904	32,830	7,369	60,265
UTAH	937	2,578	2,680	755	6,950
VERMONT	321	1,147	1,994	219	3,681
VIRGINIA	1,068	5,571	10,445	3,058	20,142
WASHINGTON	764	5,151	7,112	3,862	16,889
WEST VIRGINIA	514	2,433	6,331	785	10,063
WISCONSIN	578	9,107	11,948	2,753	24,386
WYOMING	914	3,016	2,277	417	6,624
PUERTO RICO	---	660	714	371	1,745
AMERICAN SAMOA	---	22	72	---	94
TOTAL	42,454	265,821	401,936	134,984	845,195

1/ Figures do not include 443 miles designated under 23 U.S.C. 103(e)(2) and mileage designated under 23 U.S.C. 139.

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The Federal-Aid Highway Act of 1981, in Section 4(b), redefined construction eligibility for obligation of Interstate construction funding. The act did not change design standards which are applied uniformly to all States. Eligible projects under the redefinition include gap completion, major upgrading of incorporated segments, approved stage construction, and the addition of mixed lanes and high occupancy vehicle lanes where approved and included in the 1981 estimate. Where such work is eligible on these projects, the estimate reflects the cost to incorporate the latest safety features; and to provide essential environmental requirements in order to mitigate environmental effects such as air, noise and water pollution. Where items of work are not eligible for Interstate construction funding but are required to meet design standards, the work is still eligible for Interstate funding, in the form of Interstate 4R funding. The Federal-Aid Highway Act of 1981 changed the R-R-R program to a new post Interstate construction program (4R program) by adding "reconstruction" to the definition of eligible work and increasing the funding levels through fiscal year 1984. The Interstate program is considered a "dual funded" program (initial construction and reconstruction) until initial construction is complete. After that time the Interstate 4R program continues as the permanent long range reconstruction, resurfacing, rehabilitation and restoration program for upgrading of the System. This estimate includes only work considered "inital construction" under existing administrative policies governing the use of Interstate construction funds, and excludes the costs of 4R work which, under Section 102(c) of the 1976 Federal-Aid Highway Act, are not eligible for participation with those funds.

The interchange of information and instruction on a national basis, together with the liaison between the State highway personnel and Federal Highway Administration (FHWA) personnel at division and regional levels during preparation of the estimate, provided the means of achieving uniformity in applying the estimate regulations required by the law.

This estimate, prepared on the basis of a uniform set of rules applied uniformly throughout the States, results in a report of estimated costs to complete the Interstate System which is a sound reflection of the relative needs of the several States and an equitable basis for apportioning funds among the States to insure that all States may pursue timely completion of their portion of the System. It remains, however, an estimate based upon the best engineering judgment of the State highway departments and the FHWA -- of what it would cost at this date to complete the designated Interstate System if construction was performed at the unit prices of calendar year 1981 -- which are reflected in this estimate -- and in keeping with the scope of construction and traffic service and attention to social, economic, and environmental factors envisioned at the time the estimate was prepared. In applying the governing guidelines and engineering judgment in the preparation of this estimate, special attention was given to remaining high-cost segments, and potential high-cost segments. In accordance with the Federal-aid Highway Act of 1981, in Section 4(b), our instructions specifically prohibited inclusion of design concepts, locations and other construction features not included in the 1981 estimate unless approved pursuant to that section. However, costs for minor design refinements have been included. These restrictive instructions were considered appropriate because of the eligibility restraint of the 1981 act and our continuing concern over the escalating costs to complete the System; and to assure that the work included in the estimate is eligible, fully justified, attainable, cost effective, and represents a sound basis for computing Federal funding entitlements under the Interstate transfer program (23 U.S.C. 103(e)(4)). Adjustments of State estimates were made by FHWA, where necessary, to

achieve conformance with the estimate manual and other estimating guidelines. The estimate totals as shown in Table 4 are based on current prevailing factors and carry no forecast of future cost trends.

The individual estimates of the several States, or the estimates of individual routes within a State, although prepared on a uniform basis and reflecting uniform design criteria, will not result in uniform construction costs per mile of highway, uniform right-of-way costs per mile, or uniform values among the States for any other average factors. A comparison of such averages is meaningless because of the wide variation of conditions of traffic, topography, climate, status of development, and other factors peculiar to the section of highway being considered.

Within the scope of practical uniformity there is a balance between traffic needs in a particular circumstance and the highway design used to satisfy that need. There is, and there has to be, provision for some range and variation in design to properly reflect the many varying factors involved under different local conditions. Uniformity in this sense, therefore, means the application in all States of the design range provided in the geometric design standards approved for the Interstate System pursuant to Title 23, United States Code and the eligibility provisions in Section 4(b) of the 1981 act.

PREPARATION OF THE ESTIMATE AND THE BASIC PRINCIPLES AND PROCEDURES FOLLOWED

The estimate of cost of completing the Interstate System was prepared in each State by personnel of the State highway department and the division office of the FHWA. Representatives from the FHWA regional offices worked closely with the State and division office personnel in its preparation. Representatives from the Washington Headquarters of FHWA travelled to many of the States during the course of the estimate preparation. These trips at periodic intervals by individuals who had traveled in other regions on the estimate review helped to provide the interregional inspection and correlation necessary to assure a high level of uniformity on a nationwide basis.

Each State assembled its estimate in a bound volume following a standard format which includes maps showing the location of the Interstate routes in that State, plates showing the engineering features, and tables listing the design criteria, route and route section mileages, and estimated costs for each section broken down into major elements of construction. Delaware, North Dakota, and Nebraska, however, submitted abbreviated estimates per an option in our instructions because they have no eligible costs to report.

In preparing this estimate of the cost of completing the Interstate System, the date January 1, 1982, was selected as the cutoff date, and all Federal-aid work on which the FHWA had authorized the State to proceed as of the close of books for the month of December 1981 was considered as having been completed under the financing arrangements then in effect. This means that the cost of any work on the Interstate System which was to be accomplished with funds already assigned (obligated) for construction has not been included in this estimate. Similarly, right-of-way costs and preliminary engineering costs for which authorization to proceed had been given and funds obligated as of January 1, 1982, are not included in this revised estimate of the cost of completing the Interstate System.

In providing a uniform basis for estimate preparation, it was necessary to select a common base period for the unit contruction prices to be used in the estimate.

The unit prices for this estimate are based on weighted average low bid prices in the State for construction awarded to contract during the calendar year 1981. Thus, the price base represents the most recent data available at estimate preparation time.

Each State's estimate, when completed, was forwarded through the field offices of the FHWA to the Washington Headquarters where the estimates have been reviewed and evaluated for submission of this report to the Congress.

COST SUMMARIES AND APPORTIONMENT FACTORS

The data summarized in the following tables are derived from material presented in the 50 volumes of State reports as well as from other fiscal information. Table 3 lists by States: (1) the amounts of Interstate funds which were apportioned for fiscal year 1984 under the Surface Transportation Assistance Act of 1982, less the one and one-half percent deduction for Highway Planning and Research (HPR), together with corresponding amounts of estimated State matching funds; and (2) the amounts of unobligated construction balances (not yet assigned to projects) as of January 1, 1982, together with the corresponding estimated amount of State matching funds, adjusted to reflect reductions for lapsed fiscal year 1982 funds, reductions relating to Section 103(e)(4) of Title 23, United States Code and allocations of Interstate Discretionary funds. The amounts for each State in the two categories just described have been deducted individually from the estimate of cost to complete the Interstate System in each State in order to arrive at the net cost figures to be used in establishing the factors for apportionment of funds authorized for the fiscal years 1985 and 1986. These net figures reflect the status of funding available for construction in each State at this point in time. They do not reflect future redistribution of unused funds.

Table 4 lists the estimates of cost by the States for all work not in authorized status as of January 1, 1982, which is deemed necessary to complete the Interstate System. In addition, there is tabulated the cost of work which has been accomplished on the Interstate System by States, under the provisions of Title 23, United States Code, Section 115 ("Construction by States in advance of apportionment -- Interstate System"), Section 122 ("Payment to States for bond retirement") and Section 108(c) ("Advance Acquisition of Right-of-Way"), which costs are ultimately to be reimbursed in part with Federal funds in the statutory ratio at the time of project authorization. The costs for work not financed -- not in authorized status -- as of January 1, 1982, are shown in three categories: (1) preliminary engineering, (2) right-of-way, and (3) construction. The summation of costs for these three elements of work plus the cost of projects undertaken in advance of apportionment of Interstate funds, less the total amounts already available, shown in Table 3, which take into consideration all apportionments made to date of this report, represents the remaining costs to be financed with Interstate System funds and State matching funds to complete the Interstate System as estimated in detail by the States for apportionment factor purposes. The ratio of the Federal share of this cost in each State to the sum of the Federal share of these costs in all the States determines the factors for apportionment of funds for the fiscal years 1985 and 1986.

Table 5 shows in summary the remaining costs in each State as set forth in Table 4, the Federal share of these costs, and the resulting apportionment factor for each State. This table reflects apportionment factors computed in the same manner as in previous Interstate Cost Estimates. The costs represent funds needed at this point in time in each State and the factors are based on those needed funds.

TABLE 3 - AMOUNTS NOT INCLUDED IN COSTS USED TO DETERMINE APPORTIONMENT FACTORS IN 1983 ESTIMATE

(In thousands of dollars)

STATE	INTERSTATE APPORTIONMENT FOR FISCAL YEAR 1984 3/	ESTIMATE OF STATE FUNDS TO MATCH APPORTIONMENT FOR FISCAL 1984	UNOBLIGATED BALANCE INTERSTATE FUNDS 1/3/	ESTIMATED STATE FUNDS TO MATCH UNOBLIGATED BALANCE INTERSTATE FUNDS 1/	TOTAL
ALABAMA	90,480	10,053	80,546	8,950	190,029
ALASKA 2/	---	---	---	---	---
ARIZONA	49,914	3,017	72,048	4,355	129,334
ARKANSAS	17,732	1,970	16,208	1,801	37,711
CALIFORNIA	372,583	34,567	575,920	53,432	1,036,502
COLORADO	57,912	5,707	51,879	5,112	120,610
CONNECTICUT	105,667	11,741	180,116	20,013	317,537
DELAWARE	17,732	1,970	29,193	3,244	52,139
DIST. OF COL.	26,020	2,891	67,099	7,455	103,465
FLORIDA	178,664	19,852	158,218	17,580	374,314
GEORGIA	150,383	16,709	174,997	19,444	361,533
HAWAII	67,227	7,470	130,693	14,521	219,911
IDAHO	17,732	1,479	28,244	2,356	49,811
ILLINOIS	44,683	4,965	50,328	5,592	105,568
INDIANA	17,732	1,970	29,966	3,330	52,998
IOWA	17,732	1,970	43,431	4,826	67,959
KANSAS	26,155	2,906	24,429	2,714	56,204
KENTUCKY	89,940	9,993	81,027	9,003	189,963
LOUISIANA	159,934	17,770	196,876	21,875	396,455
MAINE	17,732	1,970	25,076	2,786	47,564
MARYLAND	225,661	25,073	221,753	24,639	497,126
MASSACHUSETTS	100,739	11,193	92,120	10,236	214,288
MICHIGAN	55,854	6,206	78,419	8,713	149,192
MINNESOTA	62,435	6,937	53,830	5,981	129,183
MISSISSIPPI	17,732	1,970	32,786	3,643	56,131
MISSOURI	30,441	3,382	49,522	5,502	88,847
MONTANA	17,732	1,709	24,813	2,391	46,645
NEBRASKA	17,732	1,970	27,749	3,083	50,534
NEVADA	17,732	933	54,270	2,856	75,791
NEW HAMPSHIRE	17,732	1,970	15,663	1,740	37,105
NEW JERSEY	100,672	11,186	159,980	17,776	289,614
NEW MEXICO	17,732	1,440	47,430	3,851	70,453
NEW YORK	167,831	18,648	234,131	26,015	446,625
NORTH CAROLINA	50,825	5,647	72,751	8,083	137,306
NORTH DAKOTA	17,732	1,970	16,283	1,809	37,794
OHIO	55,280	6,142	100,507	11,167	173,096
OKLAHOMA	28,686	3,187	36,339	4,038	72,250
OREGON	36,651	3,092	49,124	4,144	93,011
PENNSYLVANIA	168,945	18,772	318,810	35,423	541,950
RHODE ISLAND	64,190	7,132	12,435	1,382	85,139
SOUTH CAROLINA	50,150	5,572	66,417	7,380	129,519
SOUTH DAKOTA	17,732	1,734	32,280	3,157	54,903
TENNESSEE	39,587	4,399	65,028	7,225	116,239
TEXAS	175,492	19,499	175,206	19,467	389,664
UTAH	45,594	2,823	49,391	3,058	100,866
VERMONT	17,732	1,970	23,389	2,599	45,690
VIRGINIA	121,393	13,488	98,965	10,996	244,842
WASHINGTON	146,063	15,083	140,829	14,543	316,518
WEST VIRGINIA	78,026	8,670	79,340	8,816	174,852
WISCONSIN	19,743	2,194	36,098	4,011	62,046
WYOMING	17,732	1,425	17,439	1,402	37,998
TOTAL	3,527,532	374,386	4,499,391	473,515	8,874,824

1/ Includes an adjustment for lapsed fiscal year 1982 funds. The unobligated balance also reflects adjustments resulting from Interstate withdrawals under 23 U.S.C. 103(e)(4) and allocations of discretionary funds.

2/ The ½-percent minimum apportionment provided by P.L. 95-599 to Alaska has been excluded for the purposes of this report.

3/ Amounts shown represent funds available for construction and exclude the one and one-half percent deduction for HPR funds for each State.

TABLE 4 - NATIONAL SUMMARY OF ESTIMATED COSTS TO COMPLETE SYSTEM, 1983 ESTIMATE, AS OF DECEMBER 31, 1981

(In thousands of dollars)

STATE	PRELIMINARY ENGINEERING	RIGHT-OF-WAY	CONSTRUCTION	BONDS ADVANCED CONSTRUCTION, AND ADVANCE RIGHT-OF-WAY ACQUISITION PROJECT OBLIGATIONS	SUBTOTAL	AMOUNTS ALREADY AVAILABLE (FROM TABLE 3)	ESTIMATED FEDERAL-AID AND STATE MATCHING FUNDS REQUIRED TO COMPLETE SYSTEM
ALABAMA	27,176	128,910	813,505	140,301	1,109,892	190,029	919,863
ALASKA	---	---	---	---	---	---	---
ARIZONA	27,535	96,130	528,326	---	651,991	129,334	522,657
ARKANSAS	25	---	15,836	--	15,861	37,711	---
CALIFORNIA	131,356	823,477	2,512,149	---	3,466,982	1,036,502	2,430,480
COLORADO	22,792	31,300	547,829	8,141	610,062	120,610	489,452
CONNECTICUT	7,218	116,149	1,075,656	---	1,199,023	317,537	881,486
DELAWARE	---	---	---	---	---	52,139	---
DIST. OF COL.	13,871	17,385	301,529	---	332,785	103,465	229,320
FLORIDA	57,308	485,942	1,611,448	152,746	2,307,444	374,314	1,933,130
GEORGIA	23,046	77,463	1,016,456	476,525	1,593,490	361,533	1,231,957
HAWAII	63,642	14,913	741,109	---	819,664	219,911	599,753
IDAHO	11,916	15,964	212,779	---	240,659	49,811	190,848
ILLINOIS	4,087	5,171	329,805	---	339,063	105,568	233,495
INDIANA	1,314	10,821	122,528	---	134,663	52,998	81,665
IOWA	4,516	---	100,092	---	104,608	67,959	36,649
KANSAS	8,118	12,916	221,949	---	242,983	56,204	186,779
KENTUCKY	17,049	79,702	650,678	---	747,429	189,963	557,466
LOUISIANA	23,710	249,660	1,386,240	---	1,659,610	396,455	1,263,155
MAINE	1,975	3,979	75,492	---	81,446	47,564	33,882
MARYLAND	85,517	151,379	2,088,857	---	2,325,753	497,126	1,828,627
MASSACHUSETTS	41,177	96,514	681,135	---	818,826	214,288	604,538
MICHIGAN	12,788	52,794	582,851	15,859	664,292	149,192	515,100
MINNESOTA	24,894	142,600	590,198	18,703	776,395	129,183	647,212
MISSISSIPPI	3,394	12,655	98,958	---	115,007	56,131	58,876
MISSOURI	90	536	255,715	---	256,341	88,847	167,494
MONTANA	1,078	---	170,354	7,661	179,093	46,645	132,448
NEBRASKA	1	---	---	---	1	50,534	---
NEVADA	2,192	4,366	158,970	58,297	223,825	75,791	148,034
NEW HAMPSHIRE	3,395	7,531	112,733	4,165	127,824	37,105	90,719
NEW JERSEY	53,032	159,360	1,138,874	---	1,351,266	289,614	1,061,652
NEW MEXICO	943	---	107,187	14,159	122,289	70,453	51,836
NEW YORK	111,510	254,269	1,910,945	48,031	2,324,755	446,625	1,878,130
NORTH CAROLINA	7,835	33,221	412,006	---	453,062	137,306	315,756
NORTH DAKOTA	---	---	---	---	---	37,794	---
OHIO	17,026	55,199	632,217	---	704,442	173,096	531,346
OKLAHOMA	---	35,946	241,541	---	277,487	72,250	205,237
OREGON	6,930	19,034	269,577	---	295,541	93,011	202,530
PENNSYLVANIA	75,841	182,728	2,078,790	21,614	2,358,973	541,950	1,817,023
RHODE ISLAND	5,935	12,679	118,376	---	136,990	85,139	51,851
SOUTH CAROLINA	13,224	12,209	458,020	1,685	485,138	129,519	355,619
SOUTH DAKOTA	5	---	15,312	---	15,317	54,903	---
TENNESSEE	22,115	14,597	255,820	---	292,532	116,239	176,293
TEXAS	37,278	156,915	1,510,723	143,061	1,847,977	389,664	1,458,313
UTAH	24,878	19,514	620,777	---	665,169	100,866	564,303
VERMONT	10	---	2,542	---	2,552	45,690	---
VIRGINIA	1,159	42,667	1,325,253	---	1,369,079	244,842	1,124,237
WASHINGTON	80,303	121,621	1,342,293	---	1,544,217	316,518	1,227,699
WEST VIRGINIA	3,825	17,684	742,766	2,050	766,325	174,852	591,473
WISCONSIN	3,514	2,036	65,533	---	71,083	62,046	9,037
WYOMING	286	---	27,933	---	28,219	37,998	---
TOTAL	1,086,829	3,777,936	30,279,662	1,112,998	36,257,325	8,874,824	27,637,420

TABLE 5 - ESTIMATED FEDERAL-AID AND STATE MATCHING FUNDS REQUIRED TO COMPLETE THE SYSTEM, AND APPORTIONMENT FACTORS FOR DISTRIBUTION OF 1985 AND 1986 FISCAL YEAR AUTHORIZATIONS

STATE	ESTIMATED FEDERAL-AID AND STATE MATCHING FUNDS REQUIRED TO COMPLETE SYSTEM (THOUSANDS)	ESTIMATED FEDERAL SHARE OF FUNDS REQUIRED TO COMPLETE SYSTEM (THOUSANDS)	APPORTIONMENT FACTORS (PERCENT)
ALABAMA	919,863	827,877	3.313
ALASKA	---	---	---
ARIZONA	522,657	492,866	1.972
ARKANSAS	---	---	---
CALIFORNIA	2,430,480	2,224,132	8.901
COLORADO	489,452	445,548	1.783
CONNECTICUT	881,486	793,337	3.175
DELAWARE	---	---	---
DIST. OF COL.	229,320	206,388	0.826
FLORIDA	1,933,130	1,739,817	6.963
GEORGIA	1,231,957	1,108,761	4.437
HAWAII	599,753	539,778	2.160
IDAHO	190,848	176,153	0.705
ILLINOIS	233,495	210,146	0.841
INDIANA	81,665	73,499	0.294
IOWA	36,649	32,984	0.132
KANSAS	186,779	168,101	0.673
KENTUCKY	557,466	501,719	2.008
LOUISIANA	1,263,155	1,136,840	4.550
MAINE	33,882	30,494	0.122
MARYLAND	1,828,627	1,645,764	6.586
MASSACHUSETTS	604,538	544,084	2.177
MICHIGAN	515,100	463,590	1.855
MINNESOTA	647,212	582,491	2.331
MISSISSIPPI	58,876	52,988	0.212
MISSOURI	167,494	150,745	0.603
MONTANA	132,448	120,806	0.483
NEBRASKA	---	---	---
NEVADA	148,034	140,632	0.563
NEW HAMPSHIRE	90,719	81,647	0.327
NEW JERSEY	1,061,652	955,487	3.824
NEW MEXICO	51,836	47,943	0.192
NEW YORK	1,878,130	1,690,317	6.764
NORTH CAROLINA	315,756	284,180	1.137
NORTH DAKOTA	---	---	---
OHIO	531,346	478,211	1.914
OKLAHOMA	205,237	184,713	0.739
OREGON	202,530	186,773	0.747
PENNSYLVANIA	1,817,023	1,635,321	6.544
RHODE ISLAND	51,851	46,666	0.187
SOUTH CAROLINA	355,619	320,057	1.281
SOUTH DAKOTA	---	---	---
TENNESSEE	176,293	158,664	0.635
TEXAS	1,458,313	1,312,482	5.252
UTAH	564,303	531,404	2.127
VERMONT	---	---	---
VIRGINIA	1,124,237	1,011,813	4.049
WASHINGTON	1,227,699	1,112,786	4.453
WEST VIRGINIA	591,473	532,326	2.130
WISCONSIN	9,037	8,133	0.033
WYOMING	---	---	---
TOTAL	27,637,420	24,988,463	100.000

COMPARISON OF 1981 AND 1983 ESTIMATES OF TOTAL SYSTEM COSTS

This cost comparison is developed by comparing the total system cost, from its beginning to its completion, as reflected in two Interstate cost estimates; the 1983 estimate and the 1981 estimate. This analysis reflects total cost which includes not only construction but FHWA administration and research, metropolitan planning, and State highway planning and research.

The estimated total cost for the Interstate System as developed from the estimate submitted in January 1981 was $132.4 billion, of which $118.3 billion was the estimated Federal share. The 1983 total estimated cost without allowance for possible escalation in future program years is $123.3 billion, of which $109.9 billion is the estimated Federal share. These costs are shown in Table 6.

Also, as shown in Table 6, the remaining cost to complete construction is $36.3 billion, of which $32.8 billion is the Federal share. Approximately 29 percent of this remaining cost is for work yet to be accomplished on sections of the System which are already serving traffic. Such work, eligible under the Federal-Aid Highway Act of 1981, generally includes remaining phases of initial construction, major upgrading of segments incorporated into the System and which were not built with Interstate funds, and added lanes (mixed traffic and high occupancy vehicle) on open to traffic sections.

Table 7 presents a comparison between the estimated costs as now submitted to the Congress, the estimate furnished the Congress in January 1981, and the redefined 1981 estimate pursuant to the Federal-Aid Highway Act of 1981. The table shows a $14.9 billion decrease in total System cost resulting from withdrawals and redefinition of construction eligibility as reflected in the estimate approved in the 1981 highway act and a total System increase of $4.3 billion between the 1981 estimate (redefined) and the 1983 estimate. That increase is comprised of two basic elements: (1) an estimated $2.9 billion increase in the cost (including inflation and design refinements) of eligible work remaining to be completed and included in the 1981 estimate (redefined); and, (2) an estimated $1.4 billion obligation of Interstate construction funds for work that is now not eligible (4R type work under the redefinition in the 1981 act) and which is not included in the 1981 estimate redefined. The second element ($1.4 billion of 4R type work) was work included in the 1981 estimate and obligated before enactment of the 1981 act. These obligations are shown separately on Tables 6 and 7 in order to properly reflect the changes in completion cost and total System cost between the 1981 and 1983 estimates. The $1.4 billion in obligations on 4R type work (before the 1981 act) is part of the $14.9 billion decrease, but it is considered part of the total System cost because it represents a legitimate obligation of Interstate construction funds. However, it is shown separately in this cost comparison analysis because it is not considered an increase to the costs of work eligible under the redefinition.

The total System cost shown in Table 7 for the 1981 estimate has been revised to include Interstate Discretionary funds obligated at the time of the 1981 estimate to permit comparison with the 1983 estimate. This total System cost for the 1981 estimate ($133.9 billion) is $1.532 billion higher than the $132.4 billion total System cost shown in the 1981 estimate report to Congress (Tables 6 and 7) when these Interstate Discretionary fund obligations are included.

TABLE 6 - ESTIMATED TOTAL COST OF THE INTERSTATE SYSTEM

(In millions of dollars)

	Total Cost	Federal Funds
1983 cost estimate for designated System of 42,900 miles Remaining to complete as of Jan. 1, 1982 (Table 4)	36,257	32,786
Total obligations prior to Jan. 1, 1982.....	82,326	72,671
Less estimated obligation on 4R Type work between 1/1/80 and 1/1/82 included above in total obligations.....	-1,397	-1,263
Subtotal for construction cost of the 42,900-mile System.....	117,186	104,194
4R Type obligations between 1/1/80 and 1/1/82.....	1,397	1,263
State highway planning and research.....	1,864	1,686
Metropolitan planning.....	372	336
FHWA Administration and Research.....	2,148	2,148
Contingencies.....	333	273
GRAND TOTAL.....	123,300	109,900

TABLE 7 - COMPARISON OF THE 1981 AND THE 1983 ESTIMATES OF TOTAL COST OF THE INTERSTATE SYSTEM

(In millions of dollars)

	1981[1/]		1981 (Redefined by 1981 Highway Act)		1983	
	Total Cost	Federal Share	Total Cost	Federal Share	Total Cost	Federal Share
Construction of Interstate Mileage in State Estimate:						
1981 Estimate (42,940 miles)	129,163	115,172	114,284	101,725		
1983 Estimate (42,900 miles)	---	---	---	---	117,186	104,194
4R Type Obligations Between 1/1/80 and 1/1/82.....	---	---	---	---	1,397	1,263
State highway planning and research.....	1,890	1,703	1,890	1,703	1,864	1,686
Metropolitan planning.....	383	345	383	345	372	336
FHWA administration and research.....	2,175	2,175	2,175	2,175	2,148	2,148
Contingencies.....	321	290	268	252	333	273
GRAND TOTAL.....	133,932	119,685	119,000	106,200	123,300	109,900

[1/] The total cost shown for the 1981 estimate has been revised to include obligation of Discretionary funds to permit comparison with the 1983 estimate. Discretionary obligations of $1.532 billion as of 12/31/81 have been added to the total cost of $132.4 billion as reported in the 1981 estimate.

The following is a brief summary and tabulation of the costs which account for the difference between the 1981 (redefined) and 1983 estimates of total cost. The first column indicates the cost reduction ($14.9 billion) resulting from the redefinition and withdrawals reflected in the estimate approved in the 1981 act. The second column represents the changes in cost to complete construction ($2.9 billion) on remaining eligible Interstate work after the redefinition including reductions in cost due to System withdrawals and deletions (it does not reflect the $1.4 billion of 4R type obligations before the 1981 act):

	Reductions Reflected in the Approved 1981 Estimate (Millions)	Cost Change Between 1981 (Redefined) and 1983 Estimates (Millions)
System additions and major adjustments:	$	$
(a) Major system adjustments, deletions and additions within the System....	-1,085	-703
Unit price changes:		
(b) Changes in total cost attributable to the increase in unit prices between the base year 1979 and the year 1981.....	N/A	2,062
Changes in emphasis on social considerations:		
(c) Changes due to social, economic, or environmental impact considerations including noise abatement measures, replacement parkland, landscaping, and special design features.....	-1,430	213
Subtotal.....	-2,515	1,572
Preliminary engineering and right-of-way:		
(d) Change in right-of-way costs for segments and features not included in items (a) and (c).....	-387	988
(e) Change in preliminary engineering costs for segments and features not included in items (a) and (c)..	-564	51
Subtotal.....	-951	1,039

	Reductions Reflected in the Approved 1981 Estimate (Millions)	Cost Change Between 1981 (Redefined) and 1983 Estimates (Millions)
Construction items:	$	$
(f) Changes due to design refinements for roadway items. Includes cost change for safety features on both new and existing sections.....	-8,699	514
(g) Changes in the number of interchanges and grade separations that have been approved for inclusion in the System since the 1981 estimate, other than costs reported in (a).....	-278	- 45
(h) Costs attributable to changes to structure designs, railroad grade separations, highway grade separations, viaducts, and other bridges and tunnels, including safety improvements on existing structures	-2,436	- 56
(i) Changes in the cost on additional lane projects from those reported in the 1981 estimate. Cost not reported in item (a).....	N/A	-166
(j) Construction project overruns; include an increase in costs on projects in authorized status on January 1, 1982, due to unforeseen conditions or circumstances.....	N/A	+44
Subtotal.....	-11,413	291
Total.....	-14,879	2,902

Table 8 summarizes the status of Interstate authorizations and apportionments versus the current estimate of Interstate needs. This table shows that the currently authorized funds for initial construction are short by $2.0 billion in covering the cost of the System as reflected in this estimate. The table also shows that additional apportionments of $26.3 billion are required to complete the initial construction of the Interstate System. These estimates do not consider any future effects on the cost such as inflation or withdrawals from the System. Adjustments to the authorizations and apportionments reflecting amounts not available for Interstate construction purposes have also been identified.

TABLE 8 - AUTHORIZATION AND APPORTIONMENT STATUS

	Millions
Authorizations	
Total amounts authorized for initial construction by the 1954 and subsequent Federal-Aid Highway Acts and the 1982 Surface Transportation Assistance Act chargeable to the Highway Trust Fund	$108,955
Less amounts not available for initial Interstate construction 1/	1,047
Remaining authorized amount	107,908
Current estimate of needed Interstate authorization for initial construction	109,900
Estimated additional Federal funds needed to be authorized	1,992
Apportionments:	
Total apportionments for fiscal years through 1984 for initial construction chargeable to the Highway Trust Fund	84,655
Less amounts not available for initial Interstate construction 1/	1,047
Remaining apportioned amounts	83,608
Current estimate of needed Interstate apportionments for initial construction	109,900
Estimated apportionments required for 1985 and later fiscal years for initial construction	26,292

1/ Represents Interstate apportionment reductions of $918 million pursuant to Section 103(e)(4) of Title 23, U.S.C., and the transfer of $129 million to non-Interstate purposes pursuant to Section 104(b)(1) of the 1978 Surface Transportation Assistance Act.

CONCLUSIONS

The estimated cost of completing the Interstate System, which is to be borne by the Highway Trust Fund and State matching funds, and the apportionment factors contained herein have been computed in accordance with Title 23 of the United States Code. The 1983 estimates are sound engineering appraisals of the cost to complete the Interstate System in each State based on 1981 price levels but do not represent a commitment of funds to the location, design, or cost of individual projects to be undertaken on the System. Before construction, individual projects on the System covered by this estimate will be studied further by the State highway departments and FHWA in preparing the detailed designs, plans, and specifications on which actual construction bids will be invited.

The Federal-Aid Highway Act of 1981 redefined eligibility of Interstate construction funds and established an ongoing 4R program for upgrading and reconstructing the System. Under the 1981 act, the Interstate program is considered a "dual funded" program until completion of initial construction is realized. The 4R program then continues as a permanent reconstruction, resurfacing, rehabilitation, and restoration program. This estimate presents only costs for work necessary to complete initial construction of the System to a minimum level of acceptable service pursuant to the 1981 act.

The 1981 estimate of completion cost was reduced $14.9 billion to an estimated $38.9 billion. The $2.9 billion increase in the total cost to complete eligible work on the System as reported in this estimate is the lowest cost increase over a 2-year period in the 18 years since the 1965 estimate. In part, this increase was lower than in recent years because of a leveling of construction costs for 1981. However, the relatively low increase is largely due to the redefinition of eligible work in the form of (1) work being made ineligible and transferred to the 4R program, thus reducing the amount of work subject to cost increase, and (2) downscoping of eligible projects so that only work necessary for a minimum level of acceptable service is considered. The low increase can also be attributed to the fact that the inclusion of changes to design concepts, locations and construction features not included in the 1981 estimate were precluded from inclusion in this estimate by Section 4(b) of the 1981 act.

In summary, this estimate has been prepared in accordance with the provisions of Title 23, U.S.C. and other applicable laws and regulations. The resultant apportionment factors listed in Table 5 represent a sound basis for apportioning Interstate construction funds. We recommend that these factors be approved by Congress for use in apportioning funds authorized for fiscal year 1985 and 1986.

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